

ABSTRACT OF THE DISCLOSURE

A process for the deposition of particulate material of a desired substance on a surface includes: (i) charging a particle formation vessel with a compressed fluid; (ii) introducing into the particle formation vessel a first feed stream comprising a solvent and the desired substance dissolved therein and a second feed stream comprising the compressed fluid, wherein the desired substance is less soluble in the compressed fluid relative to its solubility in the solvent and the solvent is soluble in the compressed fluid, and wherein the first feed stream is dispersed in the compressed fluid, allowing extraction of the solvent into the compressed fluid and precipitation of particles of the desired substance; (iii) exhausting compressed fluid, solvent and the desired substance from the particle formation vessel at a rate substantially equal to the rate of addition of such components to the vessel in step (ii) through a restrictive passage to a lower pressure whereby the compressed fluid is transformed to a gaseous state and a flow of particles of the desired substance is formed; and (iv) exposing a receiver surface to the exhausted flow of particles of the desired substance and depositing a uniform layer of particles on the receiver surface.